CLAIMS

1. A vaccine composition comprising a mutant p53 protein in a form that, when presented to the immune system of a mammal, induces an effective immune response.

2. A vaccine composition according to claim 1 wherein the composition also comprises a pharmaceutically acceptable medium.

3. A vaccine composition according to claim 1 wherein the form is either the mutant p53 protein on the surface of an antigen presenting cell or the mutant p53 protein combined with a pharmaceutically acceptable adjuvant.

4. A vaccine composition according to claim 3 wherein the form is the mutant p53 protein on the surface of an antigen presenting cell.

5. A vaccine composition according to claim 3 wherein the form is the mutant p53 protein combined with a pharmaceutically acceptable adjuvant.

6. A vaccine composition according to claim 4 wherein the antigen presenting cell is a eucaryotic cell.

7. A vaccine composition according to claim 6 wherein the eucaryotic cell is a dendritic cell, a major histocompatibility complex Class II positive macrophage or a monocyte.

8. A vaccine composition according to claim 7 wherein the antigen presenting cell is a dendritic cell.

9. A vaccine composition according to claim 8 wherein the dendritic cell is a recombinant dendritic cell that expresses exogenous DNA encoding mutant p53 protein on its surface.

10. A vaccine composition according to claim 5 wherein the pharmaceutically acceptable adjuvant is a bacterial cell.

11. A vaccine composition according to claim 10 wherein the bacterial cell is bacille Calmette-Guerin.

12. A vaccine composition according to claim 11 wherein the bacille Calmette-Guerin is a recombinant bacille Calmette-Guerin that expresses exogenous DNA encoding mutant p53 protein.

13. A method of inhibiting the growth of tumors in mammals comprising treating a mammal with an immunologically effective amount of a vaccine composition comprising a mutant p53 protein in a form that, when presented to the immune system of a mammal, induces an effective immune response.

14. The method of claim 13 wherein the vaccine composition also comprises a pharmaceutically acceptable medium.

15. The method of claim 13 wherein the form is either the mutant p53 protein on the surface of an antigen presenting cell or the mutant p53 protein combined with a pharmaceutically acceptable adjuvant.

16. The method according to claim 15 wherein the form is the mutant p53 protein on the surface of an antigen presenting cell.

17. The method according to claim 15 wherein the form is the mutant p53 protein combined with a pharmaceutically acceptable adjuvant.

18. The method of claim 16 wherein the antigen presenting cell is a eucaryotic cell.

19. The method of claim 18 wherein the eucaryotic cell is a dendritic cell, a major histocompatibility complex Class II positive macrophage or a monocyte.

20. The method of claim 19 wherein the antigen presenting cell is a dendritic cell.

21. The method of claim 20 wherein the dendritic cell is a recombinant dendritic cell that expresses exogenous DNA encoding mutant p53 protein.

22. The method of claim 17 wherein the pharmaceutically acceptable adjuvant is a bacterial cell.

23. The method of claim 22 wherein the bacterial cell is bacille Calmette-Guerin.

24. The method of claim 23 wherein the bacille Calmette-Guerin is a recombinant bacille Calmette-Guerin that expresses exogenous DNA encoding mutant p53 protein.

25. A recombinant antigen presenting cell that expresses exogenous DNA encoding mutant p53 protein.

26. A vaccine composition comprising a wild-type p53 protein in a form that, when presented to the immune system of a mammal, induces an effective immune response.

27. A vaccine composition according to claim 26 wherein the composition also comprises a pharmaceutically acceptable medium.

28. A vaccine composition according to claim 26 wherein the form is either the wild-type p53 protein on the surface of an antigen presenting cell or the wild-type p53 protein combined with a pharmaceutically acceptable adjuvant.

29. A vaccine composition according to claim 28 wherein the form is the wild-type p53 protein on the surface of an antigen presenting cell.

30. A vaccine composition according to claim 28 wherein the form is the wild-type p53 protein combined with a pharmaceutically acceptable adjuvant.

31. A vaccine composition according to claim 29 wherein the antigen presenting cell is a eucaryotic cell.

32. A vaccine composition according to claim 31 wherein the eucaryotic cell is a dendritic cell, a major histocompatibility complex Class II positive macrophage or a monocyte.

33. A vaccine composition according to claim 32 wherein the antigen presenting cell is a dendritic cell.

34. A vaccine composition according to claim 33 wherein the dendritic cell is a recombinant dendritic cell that expresses exogenous DNA encoding wild-type p53 protein on its surface.

35. A vaccine composition according to claim 30 wherein the pharmaceutically acceptable adjuvant is a bacterial cell.

36. A vaccine composition according to claim 35 wherein the bacterial cell is bacille Calmette-Guerin.

37. A vaccine composition according to claim 36 wherein the bacille Calmette-Guerin is a recombinant bacille Calmette-Guerin that expresses exogenous DNA encoding wild-type p53 protein.

38. A method of inhibiting the growth of tumors in mammals comprising treating a mammal with an immunologically effective amount of a vaccine composition comprising a wild-type p53 protein in a form that, when presented to the immune system of a mammal, induces an effective immune response.

39. The method of claim 38 wherein the vaccine composition also comprises a pharmaceutically acceptable medium.

40. The method of claim 38 wherein the form is either the wild-type p53 protein on the surface of an antigen presenting cell or the wild-type p53 protein combined with a pharmaceutically acceptable adjuvant.

41. The method according to claim 40 wherein the form is the wild-type p53 protein on the surface of an antigen presenting cell.

42. The method according to claim 40 wherein the form is the wild-type p53 protein combined with a pharmaceutically acceptable adjuvant.

43. The method of claim 41 wherein the antigen presenting cell is a eucaryotic cell.

44. The method of claim 43 wherein the eucaryotic cell is a dendritic cell, a major histocompatibility complex Class II positive macrophage or a monocyte.

45. The method of claim 44 wherein the antigen presenting cell is a dendritic cell.

46. The method of claim 45 wherein the dendritic cell is a recombinant dendritic cell that expresses exogenous DNA encoding wild-type p53 protein.

47. The method of claim 42 wherein the pharmaceutically acceptable adjuvant is a bacterial cell.

48. The method of claim 47 wherein the bacterial cell is bacille Calmette-Guerin.

49. The method of claim 48 wherein the bacille Calmette-Guerin is a recombinant bacille Calmette-Guerin that expresses exogenous DNA encoding wild-type p53 protein.

50. A recombinant antigen presenting cell that expresses exogenous DNA encoding wild-type p53 protein.

51. A vaccine composition according to claim 1 wherein the mutant p53 protein is a fragment expressed by a truncated mutant p53 gene.

52. A vaccine composition according to claim 51 wherein the truncated mutant p53 gene lacks exons 1-4.

53. A vaccine composition according to claim 51 wherein the truncated mutant p53 gene comprises exons 5-11.

54. A method according to claim 13 wherein the mutant p53 protein is a fragment expressed by a truncated mutant p53 gene.

55. A method according to claim 54 wherein the truncated mutant p53 gene lacks exons 1-4.

56. A method according to claim 54 wherein the truncated mutant p53 gene comprises exons 5-11.

57. A recombinant antigen presenting cell according to claim 25 wherein the mutant p53 protein is a fragment expressed by a truncated mutant p53 gene.

58. A recombinant antigen presenting cell according to claim 57 wherein the truncated mutant p53 gene lacks exons 1-4.

59. A recombinant antigen presenting cell according to claim 57 wherein the truncated mutant p53 gene comprises exons 5-11.

60. A vaccine composition according to claim 26 wherein the wild-type p53 protein is a fragment expressed by a truncated wild-type p53 gene.

61. A vaccine composition according to claim 60 wherein the truncated wild-type p53 gene lacks exons 1-4.

62. A vaccine composition according to claim 60 wherein the truncated wild-type p53 gene comprises exons 5-11.

63. A method according to claim 38 wherein the wild-type p53 protein is a fragment expressed by a truncated wild-type p53 gene.

64. A method according to claim 63 wherein the truncated wild-type p53 gene lacks exons 1-4.

65. A method according to claim 63 wherein the truncated wild-type p53 gene comprises exons 5-11.

66. A recombinant antigen presenting cell according to claim 50 wherein the wild-type p53 protein is a fragment expressed by a truncated wild-type p53 gene.

67. A recombinant antigen presenting cell according to claim 66 wherein the truncated wild-type p53 gene lacks exons 1-4.

68. A recombinant antigen presenting cell according to claim 66 wherein the truncated wild-type p53 gene comprises exons 5-11.